The past decade has seen the rapid development and exponential growth in the use of electronic, computer-based communication and information sharing via the internet, particularly across the western world. Clearly there are many benefits that result from internet usage, but until recently there has been little recognition of the dangers that may also result from the use of such technology. There is now growing evidence that the internet is a new medium through which some commonly recognised forms of child maltreatment, sexual and emotional abuse, may be pursued.

In this paper the relationship between child abuse and the internet is explored, in particular: child sexual exploitation; children's exposure to sexually explicit or offensive material; and the use of the internet by paedophiles to legitimise, reinforce and facilitate their sexual activities. Current efforts to prevent internet-related child abuse are described. These can be broadly categorised as: the monitoring and criminal prosecution of offenders; community education; the restriction of children's access to offensive material on the internet; and the regulation of the internet industry. The paper concludes with a series of recommendations for further action.

The past decade has seen the rapid development and tremendous growth in the use of electronic, computer-based communication and information sharing via the "internet". Defined as a "decentralised, self-maintaining series of links between computer networks", the internet operates throughout much of the world, and particularly the Western world (Barr 2001). Never designed as a mass communication medium, the internet was originally developed by the US Defence Department in the 1950s as a means of connecting the Department's internal computers. The speed at which society has adopted this technology, its spread internationally and its significant penetration into work, school and family life, has been described by some as a "revolution" (Siattcry 2001:13).

Typically, Australians adopt new technology rapidly and the uptake of computer technology and use of the internet is proving to be no exception, Australia is currently the third highest internet user, after the United States and Sweden (Editor 2001a). in 2000, more than half of Australian households had at least one computer, 31 per cent being connected to the internet (Editor 2001a: kIDs.ap 2000, reporting Australian Bureau of Statistics figures).

Children and young people, in particular, have readily embraced the new communication medium. Despite this, only five per cent of children across the world had access to the internet in 1999 (UNESCO (United Nations Educational, Scientific and Cultural Organisation) 2001). In the United States, the nation with the highest usage, 63 per cent of 501 surveyed 9-17 year-olds, stated that using the internet was a preferred pastime over watching television (Starch 1999). Research in the United Kingdom has found that "the greater the chance to use computers that children get, the greater their desire to use them more" (Valentine and Hollovyay undated). In Australia, a small survey of 238 students in grades 7-10 in the Australian Capital Territory found that 66 per cent of the children regularly used the internet to access a chat room (NAPCAN 2001).

Use of the internet promises many benefits for society, by circumventing the effect of geographical distance and facilitating information sharing. It has been contended, for example, that the internet can revitalise a sense of community by facilitating meaningful communication between "grass root electronic communities" (Barr 2001). The internet has also been found to have particular benefits for children and young people, who claim that its use facilitates social contacts, improves their writing and language skills and makes them "better students" (Starch 1999: 29).

It also acts as a medium for referral and advice. For example, Australia's national Kids Help Line offers online support and information for children experiencing emotional difficulties. Similarly, the US National Centre for Missing and Exploited Children's internet site receives three million "hits" a day, making the internet the primary means of finding missing children and for re-establishing some form of communication between parents and children (Finkelhor. Mitchell & VVolak 2000).
Despite the benefits associated with internet use, rapid technological advances, growth in the range of internet services and applications, and the ever-increasing take-up of the internet have not been accompanied by adequate recognition of the dangers that may result from such technology. There has been increasing recognition that the “downside” of the internet revolution may be new opportunities to harm or abuse young internet users. Broadly speaking, the internet has been shown to act as a new medium through which some commonly recognised forms of child maltreatment, sexual and emotional abuse, may be pursued (Feather 1999). Unfortunately, the development and adoption of preventative measures has not kept pace with the spread of internet use and technological developments.

This paper reviews the various means by which the internet may be a source of (or lead to) the abuse or exploitation of children and young people. The focus of this paper is on the sexual exploitation of children and their exposure to sexually explicit or offensive material. Although these areas are themselves significantly under-researched, even less is known about other forms of child abuse associated with the internet. The options currently in place to prevent abuse via the internet are reviewed, and recommendations are made about other measures that may further reduce the likelihood of harm.

**Terminology**

The term “internet” is used in this paper as a global term, encompassing terms such as the “world wide web” and “cyberspace”. Internet communication can be in the form of text, audio and visual material. This is commonly accessed through the medium of electronic mail (e-mail), newsgroups and bulletin boards (discussion groups usually based around a particular topic) and chat rooms (text conversation in real time between a group of people). Most users use the internet through an Internet Service Provider (ISP) which has the capacity to receive, transfer and store large volumes of information. Unless otherwise stated, the term, “children” is applied to children and young people under 18 years of age. Finally, the term “paedophile” will be used throughout this paper to refer to a person with a particular concern to sexual interest in children (Glasser 1990; reported by Cowburn and Dominelli 2001: 400).

**CHILD SEXUAL EXPLOITATION**

With the exception of sexual assaults perpetrated by strangers, which to date has been a relatively low risk despite societal perceptions to the contrary (Tomison 1995), professional attention and concern about the abuse and neglect of children has largely centred around the maltreatment perpetrated by a child’s family members or friends (Stanley and Goddard in press).

The development and spread of the internet, however, enables easy and often private access to children, thus providing increased opportunities for the solicitation of children and the committing of abusive acts by offenders outside the family. Of particular concern is the increased opportunities for the sexual exploitation of children and children’s increased access to offensive and/or age inappropriate material through the internet media. The internet also facilitates the activities of offenders by providing a simple and quick means of communication which allows a person to remain anonymous and/or create false identities. In the following sections, these areas of concern are discussed in greater detail.
Solicitation of children

The sexual exploitation of children via the internet has become so prevalent that it is said to have become “a serious problem” (End Child Prostitution and Trafficking [ECPAT] 2001). In the United States, 19 per cent of a nationally representative sample of 1,501 surveyed children, aged 10-17 years of age, who regularly (defined in the research as children who use the internet at least once a month for six months) use the internet, reported being approached for sex through the internet media at least once a year (Finkelhor et al. 2000). One in seven of these children reported that the offender also attempted to contact them by telephone or by postal mail. In the small Australian survey of adolescent internet users (reported above), 27 per cent of the children believed they had been contacted by a sexual predator, while using a chat room (NAPCAN 2001).

Why has the internet become a popular means of recruiting children for sexual purposes? First, it provides both easy access to children, and a reduced risk to offenders of being identified (Feather 1999). It provides an opportunity for offenders to remain anonymous or to misrepresent their identity and intent, leading a child to believe that he or she is talking with another child, a trusted “friend” or a caring parent figure (ECPAT 2001). An offender may lurk in internet chat rooms, gathering information until an opportunity arises to move the conversation with a child to a private chat room or to a mobile phone, and then ultimately arrange a real life meeting (Aftab 2000; Carr 2001).

Such dangers are exacerbated because parents’ or teachers’ warnings about the dangers of talking to strangers or agreeing to meet with them (sometimes referred to as “stranger-danger”), may not be triggered in children meeting others on the internet (Aftab 2000). Without an explicit discussion that outlines the potential risks and actions to be taken if they are feeling uncomfortable, children may not associate internet communication with unknown individuals with a potential threat.

“At risk” children

Sexual offenders often target children with particular characteristics (Mitchell, Finkelhor and Wolak 2001; Petraitis and O’Connor 1999). These may be children in the care of the state; children who have experienced prior maltreatment; emotionally immature children with learning or social difficulties and problems with peer friendships; love or attention deprived children; children with strong respect for adult status; children from single parent families; children who will co-operate for a desired reward (such as money, computer games); and, children with low self esteem. A study of children aged 10-17 years in the United States found that children under 14 years who were “troubled” (defined as being exposed to negative life events, maltreated and/or depressed) were more likely to be solicited (Mitchell et al. 2001).

Reporting the abuse

It would appear that children often do not report sexual solicitation, even when the offender attempts to contact them outside the internet, in the US study reported above, only one-quarter of the children who had encountered a sexual approach reported this to a parent, and only 10 per cent of approaches were reported to the police, an ISP, or another authority such as a teacher (Finkelhor et al. 2000; Mitchell et al. 2001). Although very little research has been undertaken on the impact on children of attempted solicitation, Finkelhor and colleagues’ study does indicate that approximately one-quarter of the children who had been solicited for sexual purposes reported being extremely upset or afraid, with the younger children (10-13 years) reporting a greater adverse impact (Finkelhor et al. 2000).

Similar findings were reported in the small Australian survey of adolescent students reported above (NAPCAN 2001). Only one-quarter of the children who had been sexually solicited told a parent, and no reports were made to the police. One-third of the children did not disclose the solicitation at all. The Finkelhor and NAPCAN studies provide some support for the view that children often keep such “cyber-friendships” a secret from parents and sometimes friends (ECPAT 2001).

Finally, another study has supported the apparent reluctance by many children to report inappropriate internet material or contact. The Australian Broadcasting Authority (ABA) (2001b) recently undertook a study that examined children’s exposure to a broad range of offensive material on the internet. Using a sample of 310 internet-using households where there was at least one child under 18 years of age, the ABA reported that 44 per cent of the children who had been exposed to undesired internet content had reported this experience to a parent (ABA 2001b).

Offenders

Although child sexual offenders can be female and young, the “overwhelming majority” are typically reported as being mature aged males, many of whom are known to the child victim (Queensland Crime Commission and Queensland Police Service 2000; Tomison 1995). Between 1994 and 1998, 97 per cent of child sexual offences reported to the police in Queensland were perpetrated by males (Queensland Crime Commission and Queensland Police Service 2000). The average age of a non-familial offender at the time of his first child sexual offence was 30 years (Queensland Crime Commission and Queensland Police Service 2000).

The findings from a US study present a very different picture of child sexual offenders who use the internet. Just under one-third of offenders were reported by the child victims as being female. Where the age was reported by the children, nearly half of the perpetrators were reported to be under 18 years of age, with very few aged over 25 years (Finkelhor et al. 2000). However, these findings need to be treated with caution, as it is unclear how the victims knew the “true” age or sex of the offender, as offenders will often lower their age and may also misrepresent their gender (Aftab 2000).

Despite the need for exercising caution with regard to Finkelhor and colleagues’ findings, it may be that the opportunities for solicitation on the internet have enabled a wider group of people to become offenders. This viewpoint is supported by a UNESCO meeting of experts on
child sexual abuse and the internet, who report that there has been a recent increase in offences by people who are sexually indiscriminate and use children if they are available (Arnaldo 2001). Thus, the increased opportunities for criminal behaviour provided by the internet would appear to be leading to an increase in the sexual exploitation of children and young people (Carlsson 1999) by a greater range of people than traditionally have been known to offend (O’Connor, personal communication 2001).

**PAEDOPHILE ACTIVITIES ON THE INTERNET**

As well as being used for direct sexual solicitation, the internet is used by paedophiles to legitimise, reinforce and facilitate their sexual inclinations (Feather 1999). An Australian study noted that “extensive paedophile activity and organisation” can be found in publicly accessible parts of the internet (Fordc and Patterson 1998: 6).

The internet has facilitated communication between paedophiles (Feather 1999). Such contact may be organised formally through people or sites on the internet, known as “facilitators”. Such sites provide support, advice and encouragement, such as: location of the “best” newsgroups; assistance with organisation and distribution of material; technical advice, such as down-loading and on decoding pornographic material, and remaining anonymous; and, general integration into the virtual community (Feather 1999; Forde and Patterson 1998; O’Connell 2001).

Internet chat rooms are often used by paedophiles to indulge in sexual fantasies (Aflah 2000). Selicic (2001) reports that over 23,000 sites and 40,000 openly advertised chat rooms are devoted to the defence of adult-child sexual relations. One prominent paedophile group that has developed an internet presence is the North American Men/Boy Love Association (NAMBLA). The stated goal for this organisation is “to end the extreme oppression of men and boys in mutually consensual relationships” by “building understanding and support for such relationships” and “educating the general public on the benevolent nature of man/boy love” (NAMBLA 2001).

**Child pornography**

Although it is difficult to gauge the extent of child pornography on the internet, there are estimates of 14 million pornographic sites (Costello 2001), some of which carry an estimated one million pornographic images of children (Wellard 2001). The rate of discovery of activity by law enforcement agencies gives one indication of the extent of child pornography. In the United States, the rate of convictions for online offences against children is about 1,000 people annually - and rising - with known activity being substantially higher than actual arrests (Carr 2001).

Recent publicity has been given to the trial of seven men in the United Kingdom who were members of die VWOnderland Club, an internet organisation of paedophiles operating in Europe, Australia and North America (see, for example, BBC News online 2001; O’Reilly 2001). Reports of this group serve to demonstrate the nature of the online paedophile presence. Membership of the WOnderland Club was granted in exchange for providing the group with 10,000 new child pornography pictures. During the investigation into the WOnderland Club, law enforcement officers seized 750,000 pornographic images and 1,800 pornographic videos of children; 1,236 different children were identified from the images and videos seized (Hunter 2001).

**Production**

The internet provides a "uniquely safe, easily accessible, and supportive context for posting, trading and collecting child pornography" (O’Connell 1999: 7). The ready availability of child pornography on the internet has led to an increase in demand which, in turn, has led to the creation of new material (Combating use of the internet... 2001). The collection of child pornography is, in itself, exploitative of children.

Of major concern is the use of children to produce this pornography. Although advances in digital technology have enabled the production of "morphed" images (that, is, the manipulation of images of adults in sexually explicit poses into sexually explicit images of children) (Calcuttas-Santos 2001), digital technology has also made it easier and safer for amateur collectors to use children for the production of pornography and to electronically transmit their material (ECPACT 2001; Queensland Crime Commission and Queensland Police Services 2000). Exposure of the WOnderland Club revealed an exceptionally sinister side to internet paedophile activity where those who actually filmed and published their own acts of sexual abuse online, were feted as heroes (O’Reilly 2001: News 1).

**Relationship to offending**

Child pornography relayed through the internet is "regularly" used as a means of desensitising children and normalising sexual activity between adults and children (Feather 1999:6). Children depicted in the pictures are often smiling or have neutral expressions, a factor that appears to be designed to represent children as willing participants in sexual or degrading acts (O’Connell 2001). There is a recent trend for pictures to be taken in domestic settings such as a kitchen or bedroom, thus further "normalising" the activity for children who view the images (Queensland Crime Commission and Queensland Police Services 2000). Exposure to such child pornography may also serve to desensitise and reduce adult inhibitions.

Research to date has not determined whether child sex offenders are more, or less, likely to offend if they view and/or collect child pornography (Queensland Crime Commission and Queensland Police Services 2000; Smallbone and Wortley 2000). Although a Queensland study found that non familial offenders reported using adult pornography (72 per cent) and child pornography (9 per cent) (Smallbone and Wortley 2000), these findings need to be treated with caution. The study sample was almost exclusively comprised of male incarcerated offenders who had low internet literacy (88 per cent had not used the internet). Thus, the characteristics of incarcerated offenders may differ from the wider population of offenders and it would also appear that the Smallbone and Wortley sample may potentially represent a different group to those offenders who target children via the internet.
In the Australian Broadcasting Authority's (ABA 2001b) study of children's exposure to offensive material on the internet, it was reported that 47 per cent of young persons aged 11-17 years had unintentionally accessed material on the internet that they found to be "offensive or disgusting". This material was mainly pornographic in nature, but also included nudity, "rude stuff", tasteless jokes, talk in chat rooms and violent imagery (ABA 2001b).

Sexually explicit or offensive material

Research in the United States and the United Kingdom has found that between 20 and 25 per cent of children who use the internet are exposed to sexual material (Finkelhor et al. 2000; Richardson 2001; Websense Inc. and Yankelovich Partners 1999). The British study by Richardson (2001) found that one in five children aged under 17 years had visited pornographic web-sites. Finkelhor and colleagues' study found that 25 per cent of young people, aged 10-17 years, had come across undesired sexual material while searching online or using e-mail. This finding was supported by a second US study, which reported that 25 per cent of teenagers using the internet had seen web-sites featuring sexual content (Websense Inc. and Yankelovich Partners 1999).

Apart from visiting pornographic sites, e-mail offers an additional means for children to be exposed to sexually offensive or developmentally inappropriate material. For example, a free e-mail service that is commonly used by children is saturated with commercial e-mails relating to sexual services, "adult" material and e-mails that appeal to link to child pornography. Titles invite you to access "Teen Sex, Teen Pics. Teen Movies", a "Free review of new hardcore porn site", "Live sex see it now" and titles too offensive to reproduce here.

In addition, e-mail addresses may be sold commercially to product marketers who send unsolicited e-mails, some of which may contain offensive material. Responses to unwanted e-mails, including requests to be taken off electronic mailing lists, frequently generates an increase in unwanted messages, as "spammers" (people who send electronic junk mail) are made aware that the address is active (Aftab 2000). Finally, children may be targeted for receipt of sexual offensive material through chat rooms (Feather 1999; Hellard 2001; Iannotta 2001; Wellard 2001). It would seem that children's exposure to offensive sexual material via the use of real time communication services on the internet (i.e. e-mails and chat rooms) must raise the level of exposure considerably above the level of contact for web-sites, reported above.

Impact

Research on understanding how children use the internet to learn about sexuality "is in its infancy" (Iannotta 2001: 23) and opinion about the impact of this varies. However, it is acknowledged that the impact will depend on the child's developmental level and her or his reason for viewing the content (Iannotta 2001). Adolescents naturally tend to seek out information on issues of normal sexual development and sexuality. Where this is not readily provided, for example, by families or by schools, they are likely to turn to their peers and the media (Sutton, Brown, Wilson and Klein 2001, reported in Iannotta 2001).

Although the majority of children (aged 10-17 years) in Finkelhor and colleagues' (2000) study stated that they were not very upset or afraid when exposed to unwanted sexual material on the internet ("normal" and offensive material were not differentiated), a sizeable proportion (23 per cent) reported being very, or extremely, upset by the exposure. The majority of these children (20 per cent of the total) reported at least one symptom of stress, in the form of avoidance behaviours, intrusive thoughts or physical symptoms.

There has been some concern expressed about the potential disruption of adolescent development by exposure to even "normal" sexual material viewed on the internet (Tidmarsh, personal communication. 2001). A known consequence of children viewing pornography over the internet is desensitisation to the material, a factor linked with children and young people becoming sexually abusive to others (Wellard 2001). Further, incarcerated adolescent sex offenders who already show disturbed personal relationships have been observed accessing pornographic material on the internet (Tidmarsh, personal communication 2001).

In contrast, other commentators believe that extreme concern about the impact on children of exposure to sexually explicit material on the internet does not appear to be warranted (Youniss and Yates 1999; reported in Iannotta 2001). Youniss and Yates note that a number of positive trends among young people in the United States have been evident in parallel to a substantial increase in internet use over the last few years. These have included a decline in sexual activity by youth and reduced rates of teenage pregnancy. It should be noted, however, that such trends would not appear to be necessarily related.

Overall, there is an urgent need for research to investigate the impact of exposure to sexually explicit and/or offensive material, and the relationship between viewing pornography and offending.

Violent material

In addition to the sexually explicit material available online, children may access fictional and documentary violence on the internet, including hate propaganda, information about drug and weaponry manufacture (Carlsson 1999, 2001; Feather 1999; Villani 2001), pictures of suicide and road accident victims, and advice on how to commit suicide (Carr 2001). Thirty-nine per cent of US teenagers are reported to have viewed sites featuring offensive music, while 20 per cent have seen sites featuring violence (Websense, Inc. and Yankelovich Partners 1999).

Researchers have also observed chat room discussion on the topics of sexuality and aggression (Iannotta 2001). The discussion was found to be "explicit", outside the norms of "acceptable" behavior, to have "little to do with relationships", and was associated with the degradation of women (Iannotta 2001: 36). Similar concerns have been
identified in other research which found that violence against women portrayed on the internet, often depicts women as being inferior to men (Carlsson 2001).

**Impact based on research on other media**

Given the current lack of research on the impact of children accessing sexual, violent and offensive material via the internet (Finkelhor et al. 2000; Villani 2001), an exploration of research on the effects of other media sources, such as television and film, may be informative. Research has shown that children learn behaviours and values from the media (Villani 2001). It has been found by some researchers that children who devote considerable time to using such media are at risk of developing an altered perspective on human relationships, and engaging in "increased violent and aggressive behavior, increased high-risk behaviors, including alcohol and tobacco use, and accelerated onset of sexual activity" (Villani 2001: 392).

Children exposed to media violence and sexually violent content have been shown to have increased hostility, they may act out violently (imitating the violence), and display fear and anxiety responses (Iannotta 2001; Warmera and Jennings 1998). Children who view violent media content have also been found to become desensitised to actual violence. This can translate into greater hesitancy to call an adult to intervene in a violent incident and less sympathy for abuse victims (Iannotta 2001; Warmera et al. 1998). It is unclear whether these changes in arousal and attitude after viewing sexually violent content are short or long term, or if the impact is cumulative (Iannotta 2001).

Finally, there are suggestions that many children may not transfer time from other media - such as the television - to the internet, but increase the total time spent using electronic media (ABA 2001b: Nielsen Media Research 1999, reported in Subrahmanyam, Kraut, Greenfield and Gross 2000). Some researchers believe that there is clear evidence that exposure to media violence "contributes in significant ways to real world violence" (Warmera et al. 1998: 58). They believe that the issue is not whether there is an impact, but what the level of this impact is.

**Commercial exploitation of children**

Children's television is increasingly being used as a market, paid for, and dominated by advertisers (Nilsson 1998). Similarly, advertising directed at children is now going online. While advertising on the television is directed to children en masse, online advertising can match a procured child's profile to a product, potentially increasing the likelihood of a sale (Magic! 1997). An example given by Magid (1997) is the use of a cartoon character who addresses the child by name, thereby breaking down the traditional barriers between content and commerce (Montgomery 2001).

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choosing those who provided stronger social support (Kraut et al. 1998, reported by Subrahmanyam et al. 2000).

**Distinguishing between reality and fantasy**

Some children who use chat rooms with multiple users, where users adopt multiple identities and engage in role playing games, can lose the ability to distinguish between real life and simulation (Turkic 1995, reported by Subrahmanyam et al. 2000). The impact on a child who loses the ability to distinguish between fantasy and reality, is not yet understood. Determining this impact is important, as children are likely to be increasingly exposed to virtual Interactions and the use of multiple identities, on the internet (Barr 2001; Subrahmanvam et al. 2000).

**PREVENTION STRATEGIES**

The last few years has seen increasing worldwide interest in. and collaborative discussions about, methods for protecting children from abuse associated with internet use. Much of this response has been initiated by UNESCO and is grounded in the 1989 United Nations Convention on the Rights of the Child. Article 17 of the United Nations Convention provides an “international framework” for child protection issues associated with the media. It calls for “the protection of the child from information and material injurious to his or her well-being” (Carlsson and von Feilitzen 1998:9,20).

The “First World Congress against the Commercial Sexual Exploitation of Children” was held in 1996. One hundred and twenty-two governments committed themselves to eliminate child prostitution, child pornography and the sex trafficking of children (ECPAT 2001). A second world congress was held in Japan in late 2001 (Editor 2001b). In 1997. The UNESCO International Clearinghouse on Children and Violence on the Screen, funded jointly by UNESCO and the Swedish Government, was established (Carlsson and von Feilitzen 1998). The European Union, OECD, Interpot, and the United Nations, have undertaken, or commissioned, several research and prevention projects to address child pornography on the internet (Directorate General, Justice and Home Affairs 1999). In 1998. the European Union developed a four year Action Plan (to conclude in January 2002) to deal with illegal and harmful content on the internet (Inhupe 2001).

A number of non-profit organisations have been formed with the aim of promoting the protection of children who use the internet. For example, an international coalition of people and groups to support actions against the misuse of the internet, the “World Citizens’ Movement to Protect Innocence in Danger” (http://www.innocenceindanger.org) (initially with the support of UNESCO) was established following a UNESCO-initiated expert meeting in 1999 (Sellier 2001). Other organisations include:

- The “Internet Watch Foundation” (http://www.iwf.org.uk)
- “Movement Against Pedophilia on the Internet” (MAPI) (http://www.info.fundp.ac.be/~niapi/napi-fr1.tm1)
- “End Child Prostitution and Trafficking for Sexual Purposes” (ECPAT) (http://www.ecpat.net)

**Whose responsibility?**

The development of successful prevention strategies requires cooperation at the individual and community levels. Such strategies need to take into account the behaviours and circumstances both of young people (and, in particular, “at risk” young people) and their families, and of offenders. Broadly speaking, they encompass:

- community education campaigns for children and parents about internet risks and safe internet behaviour;
- the development of “watch-dog” organisations which identify and monitor offensive sites, and offer information on safe internet use;
- the development of software which filters or blocks offensive material:
- regulation of the internet industry (i.e. a voluntary code of conduct); and,
- measures aimed at offenders, including the criminal prosecution of offenders, the monitoring of the activities of known offenders, the provision of programs to prevent people becoming offenders and treatment for offenders.

**The role of parents**

To date, a significant amount of the responsibility for preventing children from accessing offensive material on the internet has been left to parents, whom society expects to "take an active interest in their child’s activities” (Feather 1999:18). Certainly the United States courts have decided that the “burden” of protection of children from media content in the home “firmly rests on parents” (Ferrier 2000:4). Similarly, the Assistant Director-General for Communication, Information and Informatics at UNESCO argues that solutions must come from the family, stating that "(p)eople in their own homes can control the events in their own living room. They can indeed turn off the TV!” (Yushkivitishe 1989: 14)

A consequence of such attitudes is that many prevention measures are stinctured around individual rather than societal responses, and work on the assumption that all children will be supervised by a parent, guardian or other responsible adult who:

- is available;
- has time to devote to this issue;
- is computer literate;
- is informed about all hazards on the internet; and,
- is motivated to take action.

Such responses also assume that young people are keen to share information and involve their parent/s or caregivers in their computer activities. Yet research findings suggest that parents are not necessarily well informed about their children’s activities on the internet - in particular adolescents - due to their developing need for independence and privacy (Finkelhor et al. 2000).

Penn and Associates, for example, investigated the extent of parental monitoring of internet activity in separate interviews with parents (N=401) and teenagers aged 14-17 years (N=311) in the United States (Penn, Schoen and
Berland Associates 2000). They found many discrepancies between the reports provided by the adults and the teenagers (Penn et al. 2000). For example, 62 per cent of adults claimed they checked websites visited by their teenager, while only 36 per cent of the teenagers thought this to be so.

Other specific discrepancies identified by Penn and colleagues included the following:

- teenagers were accessing the internet at more places than parents realised, such as libraries, a parent’s office and friends’ houses;
- 45 per cent of the teenagers had placed a persona profile on the internet, whereas only 17 per cent of their parents believed this to be so;
- 81 per cent of teenagers had a private e-mail account, while 68 per cent of their parents thought this was the case; and,
- over half of the teenagers reported corresponding with strangers, while 30 per cent of parents believed this was happening (Penn ct al. 2000).

Hence, campaigns directed at parental monitoring may have limited impact. Further, rather than controlling or supervising internet activity, there is evidence to suggest that it is often the parent who asks the child or teenager for assistance in relation to the internet. Sixty-nine per cent of parents in Penn and colleagues’ study, for example, asked their children (aged 4-17 years) for advice about the internet. Similarly, 66 per cent of children (aged 9-17 years) reported helping their parents with the internet in a study completed by Starch (1999). In contrast, a recent Australian study reported that an adult family member was viewed as the household internet “expert” by 70 per cent of the parents surveyed and 58 per cent of the children (ABA 2001b).

Recognising that the degree of parental supervision will vary, it is critical that other prevention initiatives are developed to promote internet safety for children and young people. Given that children and young people may be the source of much of a family’s knowledge of the internet, considerable advantages could be gained from their greater involvement in developing prevention measures. Young people could be involved in designing campaigns that would be relevant to them. A more active involvement in media production, for example, would provide children with a platform for their opinions and increased opportunities to affect their own conditions and engage in activities more meaningful to them (von Feilitzen 1998).

**Children’s rights versus censorship**

Societal views and understanding of children’s rights and child maltreatment are subject to constant change, influenced and influencing values, cultural attitudes, and available knowledge, politics and economics, as well as being heavily steeped in emotion (Stanley and Goddard in press). While children may be valued within society, [here would seem to be a limit on how much emphasis society is prepared to place on the rights of a child, when these rights are in conflict with the interests and rights of adults (Goddard and Carew 1993). This problem could not be more clearly revealed than in relation to the development of the internet.

The internet is driven by adult philosophies of free speech and privacy. Protection of children appears to have been an afterthought, rather than a principle guiding society’s uptake of the internet. Adult “rights”, rather than the welfare of children, still appear to be guiding much policy in relation to the internet. Even UNESCO initiatives do not appear to recognise that there may be conflict between the needs of children and adults. UNESCO’s Plan of Action, developed to take up the “fight against child pornography and paedophilia on the internet”, stated that child protection on the internet “is not a matter of censorship. Ensuring that children are protected from harmful and illegal material must not compromise fundamental liberties, such as freedom of expression and information and the right to privacy” (Amaledo 2001: 170).

The whole subject of internet content (including the distribution of offensive material) is entwined with arguments relating to the merits - or otherwise - of censorship of information. Opposition to censorship on the internet is sometimes well organised through mainstream organisations such as the American Civil Liberties Union, which is a vocal opponent to an internet rating system in the United States (Calcetas-Santos 2001). Groups opposing censorship may be sophisticated in computer technology. Other forms of “protest” come from more radical or fringe organisations seeking to make their presence felt. For example, a group known as The Cult of the Dead Cow (CDe), reported to describe themselves as “ethical” hackers, has developed a new web browser designed to “cause a major headache” for law enforcers trying to remove illegal online pornography (Editor 2001d: 2).

Chifley (1999: 19) believes that “judicious censorship” is needed to control the exploitative side to society. He states that it is better to risk curbing a few adult rights to unfeathered pleasure in order to protect the rights of children. Unfortunately, how the rights of adults impede on the rights of children, is a question rarely asked.

**Community education**

There is a need for greater public awareness and informed discussion about the exploitative and abusive aspects of the internet. The internet industry provides considerable benefits for children, especially in relation to access to educational material, but these benefits come with a cost. Many parents are not aware of the extent to which children can access offensive material on the internet (Iannotta 2001).

A significant discrepancy exists in attitudes towards the monitoring of internet use and that of other forms of electronic media. Australian research has found that 98 per cent of parents of young children claim to have rules which restrict their children’s viewing of television in some way (Sheldon, Ramsay and Loncar 1994. reported by Durkin and Low 1998), yet a comparatively small number monitor internet access in the same fashion. However, the failure of many caregivers to actively engage with young children in regulating internet use is by no means limited to parents. Rarely do child protection authorities, for example, explore the issue of computer use when investigating child sexual abuse (Carr 2001).
Greater awareness is also needed in relation to links between child maltreatment and broader issues associated with the internet, including the direction and likely impact of new internet developments. It is argued that the impact on children of the present information age, of which the internet is the latest addition, has changed family life to the extent that it has "outstripped many children's ability to adapt without harmful effects on their developmental health and wellbeing" (Vimpani 2001: 2). Carnley (2001) argues that children's exposure to all forms of adult information through electronic media is instituting a demise in the period of life defined as "childhood".

Local and international initiatives

While in the mid-1990s, a World Council for Media Education was created with the aim of teaching children how to handle the media, many children who have access to the internet media still do not have media education (von Feilitzen 1998). There is also a "stark divide" between countries on their degree of awareness of the need to take preventative measures against offensive material relayed through the internet (Hammarberg 1998: 26). Despite the formation of international organisations, there is little international co-operation to support countries that are less well resourced with the means and know-how to establish prevention policies and programs (Hammarberg 1998). For example, there is a need for a greater development of Australia's outreach services (such as ECPAT) to Asia.

In Australia, many schools are integrating the use of computers into the curriculum. While this provides an introduction to this medium in a controlled setting, it needs to be accompanied by education in the areas of media literacy, critical analysis and the safer use of the internet, for both children and parents (Iannotta 2001; Sanson, Duck, Cupit et al. 2000). There are a number of initiatives currently being developed or refined that will address this need. For example, there is an increasing trend in schools to develop and enforce policy guidelines for internet use (Iannotta 2001). In Victoria, the government recently announced the introduction of a program into schools, which is said to block 8.5 million pornographic web-sites (Doherty 2001).

However, the response needs to be larger and more comprehensive. Consideration could be given to adoption of The International Society for Technology in Education technology standards for children at each grade, from kindergarten to year 12 (Committee on information Technology.. 1999, reported in Shields and Behrman 2000). These standards cover skills in:

- basic operations and concepts of the internet;
- social, ethical, and human issues;
- technology productivity tools;
- technology communication tools;
- technology research tools; and,
- technology problem-solving and decision-making tools.

Schools could more actively direct children towards the internet sites which provide interesting and useful information for them (Shields and Behrman 2000). Frequently

overshadowed by the more heavily promoted commercial sites (Montgomery 2000, reported by Shields and Behrman 2000), these sites are characterised by the diversity and educational value of their content; accessibility for children with special needs; interactivity with the site; artistry; and, safety (Wartella and Jennings 2000). Valuable sites for children include:

- Parents and Children Together Online, designed to facilitate online storytelling: http://www.indiana.edu/~eric_rec/fl/pcto/menu.html
- YO! Youth Outlook, a site which features articles written by youth: http://wwww.pacificnevs.org/yo
- National Children's and Youth Law Centre, offering legal advice for children: www.lawstuff.org.au
- Young Media Australia, an advocacy group representing the interests of children in relation to print and electronic media: http://www.youngmedia.org.au
- UNESCO's Culture of Peace News Network for children: www.cpnn.org

There is a need to develop more sites relevant to children; in particular sites which offer accurate and healthy material for children looking for sexual and relationship information on the internet (Iannotta 2001). There is also a place for schools to work with children around their responses to offensive internet content. It was found, for example, that children who were alerted to a victims feelings prior to watching a violent cartoon experienced less desensitisation to the violence than did a control group (Nathanson and Cantor 2000, reported by Iannotta 2001).

Schools could take a lead in the education of parents on the use of computer technology and the internet, familiarising parents with filter software, methods for safer internet use, the use of hotlines to report offensive material, and where to find useful and age appropriate web sites. Guidance could be given as to how parents should approach the issue of offensive internet material, as open communication with children is considered a far more effective means of prevention, rather than policing (Iannotta 2001). Internet Service Providers have an educational responsibility here also. Many simple measures could be taken, such as providing links to relevant information or web-sites via their home pages.

A number of school-based personal safety-type programs operating in Australia have also recently developed safe-surfing programs or sub-programs in order to meet parents', children's and teachers' needs for information on how to be safe online (for example, Briggs and McVetty 2000: Michaelson 1999).

Protection for "at risk" children

As noted earlier, research has suggested that children with certain characteristics, particularly those who have been victimised previously, will be the most adversely impacted by exposure to offensive material on the internet. As previous trauma may have led to an adverse developmental
impact on these children, they are less likely to have the resources to appropriately handle and/or divert offensive material and inappropriate approaches (I later 1998). Perhaps not surprisingly, multiply trauma-tised children who may have experienced dysfunctional personal relationships previously, may be particularly severely affected by access to inappropriate and offensive material. Sexual predators do not overlook the vulnerability of this group of children (Mitchell, Finkelhor and Wolak 2001).

Although there are a number of primary prevention (whole population) programs that now attempt to address the dangers of the internet for children and parents, no secondary prevention programs targeting "at risk" children and young people have been identified in this review. In addition, many of the primary prevention programs appear to underestimate the power that a determined sexual predator may hold over some children, particularly children who have already been victimised (Goddard and Stanley 1994; Stanley and Goddard 1995; Stanley and Goddard in press).

This power rests in the ability of offenders to deceive children (through feigning friendship and pretending to meet emotional needs), and often through the generation of fear. Such a person may be very persuasive to a child, an issue overlooked in many prevention programs. In addition, sexual offenders are often involved in other criminal activities, including offences involving violence - hence the potential to control a child through the use of fear (Bagley and Prichard 2000; Stanley and Coddard in press). The development of secondary prevention programs would appear to be an area requiring an urgent response. It is argued that a substantial onus for funding or providing such a response should rest with the internet industry itself.

**Preventing access to offensive material**

Rather than focusing on dealing with offending after the offence has occurred (see below), much effort has been also spent on developing various means of preventing children and young people's access to harmful or offensive material. Such initiatives include the development of advice tips and manuals and the creation of software packages that may be purchased to filter out offensive material.

Assistance to parents, other adults responsible for the protection of children, and children themselves, can also be obtained from so-called "watch-dog" internet sites which provide crime prevention information, and advice and tips on safe internet ("safe surfing") use for both parents and children. Examples of these sites include:

- **kiOs.ap (Innocence in Danger- Asia/Pacific)**  
  www.kidsap.org
- **Internet Safety: A parent's Guide**  
  http://www.ncliafc.org.uk/internet
- **Get Net Wise**  
  http://www.getnetwise.org
- **Stay Safe Online**  
  http://www.msn.staysafeoriline.com/
- **Net Alert**  
  www.nctalert.net.au

The Australian Broadcasting Authority provides community information and advice on the use of the internet (ABA 2001a). and offers advice and services about the provision of suitable internet material for children to schools. EiNA (the Educational Network of Australia www.edna.edu.au), a combined Commonwealth and State initiative provides an entry point for high-quality educational resources for schools, TAFE colleges, universities and other educational providers.

Hardcopy guides for parents are also available, including "The Parent's Guide to Protecting your Children in Cyberspace" (Aftab 2000) and a pamphlet produced by the US Federal Bureau of Investigation, "A parent's guide to internet safety" (Freeh undated). Central to the advice in most guides is to place the home computer in the activity centre of the house, so that internet use by children can be closely monitored. Advice given to children, essentially suggests that they should:

- not divulge personal information unless a parent approves;
- not send a photograph or credit card details without parental consent:
- not give out passwords, even to a good friend;
- not agree to meet a cyber-friend in person without parental approval;
- ignore "flames" (nasty or insulting messages),
- inform a parent if they access undesirable content;
- not pretend to be anyone else online;
- if an offer appears too good to be true, it probably is (Feather 1999).

Some internet sites provide a "hotline" to receive reports of offensive sites. Acting on these reports. The Internet Watch Foundation has removed 20,000 pornographic images of children from the internet, but "with an estimated 200 more being posted every day, ...it is clear that the providers are only touching the tip of the iceberg" (Wellard 2001: 27).

As part of the World Citizens’ Movement to Protect Innocence in Danger, and with the sponsorship of ECPAT Australia. kID.s.ap, an Australia-based non-profit organisation, was set up in March 2000. kID.s.ap, provides information to the Asia-Pacific region to help to eradicate child pornography and the activities of child molesters or paedophiles on the internet. The group's web site (www.kidsap.org) is designed for internet users in the Asia-Pacific region. It offers;

- responses to e-mail enquiries;
- online safety tips and filtering software;
- information about the dynamics and activities of on-line child molesters and the use of child pornography: and;
- links to related sites and resources.

**Blocks or filters**

There is an ever-increasing variety of filtering or blocking software designed to reduce children's access to inappropriate material from the internet. Although
information on the extent of the use of filter software in Australia does not appear to be currently available. 33 per cent of households in the United States use this type of software (Finkelhor et al. 2000; Penn et al. 2000).

Such packages are regularly updated to help keep pace with the growing availability of offensive material and attempts by offenders and others (see below) to beat the software. They are widely available and can be downloaded from the internet at sites such as:

- Bess
  http://www.n2h2.com
- CYBERsitter
  http://www.solidoak.com
- SurfWatch
  http://www.surfcontrol.com.au

Although less well-known, software is also available which allows users to filter out unsolicited e-mails prior to them being down-loaded onto a computer (for example, see www.avirmail.com for free software) (Wright 2001).

Other techniques that may assist in blocking children’s access to inappropriate material is site labelling or rating systems. Under this approach prior information highlighting the nature of the site content is provided and adult verification procedures (such as use of a credit card, personal identification number or warning or password access) are required before entry can be obtained.

Effectiveness

Filter software is only partly successful. A major filter software manufacturer found that only 17 per cent of children were blocked from viewing an objectionable web site by software at school, and only M per cent were blocked at home (Websense Inc. and Yankelovich Partners 1999). Similarly, research on six of the most popular internet filters used in the United States has shown that they fail to block one offensive site in five (European Commission Information Society 2001. a reporting an article by the US Consumers Union). Indeed, Wright (2001) talks about the “sheer impossibility” of restricting all access to pornographic sites on the internet. The Head of Information Technology in Victorian Government schools pointed out that pornographic sites are being produced at the rate of about 1,000 new sites every three or four weeks, noting that you “can only do what you can do” (Doherty 2001).

The problem with the software lies with the fact that the filtering is not comprehensive and there are ways to render the program less effective (Family and Community Development Committee 2000). Filtering software also has its opponents. Some free speech advocates seek to undermine filters because of their concern about “certain militant governments” misusing this software to limit information to their citizens (Feather 1999: 18). However, technological developments continue to improve the effectiveness of the software. For example, a new development relating to context-recognition is said to have the potential to automatically filter massive volumes of data before it reaches the home computer (European Commission Information Society 2001a. reporting on a Wired News article). However, at present the use of filtering software should not lead a parent or guardian to assume access to offensive material is blocked and that other preventative measures should not be taken (Jannotta 2001).

Regulation of Internet content

Internationally, the trend has been to promote the development of a self-regulatory approach for ISPs (Internet Service Providers) (Directorate General, Justice and Home Affairs 1999; Feather 1999). Self-regulation is said to “strike a balance between protection of consumers, freedom of expression and commercial interests, such as national and international ISP competitiveness and innovations” (Feather 1999:17). It has the support of UNESCO which has “encouraged self-discipline and self-regulation” of the media (Carlsson and von Feilitzen 1998: 13).

However, the scale and nature of paedophile activity that, can be found on the internet suggests that current attempts at industry self-regulation have not been particularly effective (Directorate General, Justice and Home Affairs 1999). Adding weight to this argument, 60 per cent of parents surveyed in the United States do not think that ISPs are doing enough to protect children’s privacy and security online (Pennetal. 2000).

In response, tighter legislation for ISPs is being considered in some countries. Some have argued that ISPs could be required to screen out unsuitable material and to establish moderated chat rooms (Carr. reported by Weiland 2001). The United Kingdom is said to be considering legislation that would require “remailers” (internet sites to which e-mail can be sent for forwarding anonymously to an intended destination) to keep identification records, which could be made available to the police in certain circumstances (Directorate General, Justice and Home Affairs 1999). Indeed, the internet industry could generally be required to play a more active role in controlling illegal material by conducting its own investigations and pursuing legal action against offenders, as well as actively developing technical solutions (Directorate General, justice and Home Affairs 1999).

The International Association of Prosecutors suggest that ISPs be required to provide information to law enforcers (Combating use of the internet... 2001). They propose that ISPs be required to report child pornography to the police when they learn of it, be prosecuted for knowingly distributing child pornography, and that the identity of new subscribers to ISPs should be verified with the police. Also recommended were mutual training sessions between ISPs and law enforcement agencies, with a view to improved cooperation and outcomes.

Regulation in Australia

Like many other countries, Australia’s approach to offensive internet content is based on industry self-regulation and a voluntary code of practice adopted by the Internet Industry Association. The Australian Internet Industry Association is strongly opposed to any obligation on ISPs to monitor content they provide on the internet (Internet Industry Association 2001).

Following two inquiries (in 1996 and 1998) and a Commonwealth Government Senate Select Committee review
(1999), the Broadcasting Services Amendment (Online Services) Act 1999 (Cth) came into effect on 1 January, 2000 (Family and Community Development Committee 2000). This requires:

- the establishment of a complaints hotline;
- the development of industry codes of practice by the internet industry; and,
- community education, content: monitoring and other non-legislative activities (ABA 2001a).

The ABA reports that complementary legislation is to be developed by the states and territories to regulate the activities of people who "create and/or upload objectionable content onto the internet, or who access and use such material" (ABA 2001a: 1). Unfortunately, the Commonwealth legislation has some significant omissions. First, it only relates to ISPs that are based in Australia. Second, it only relates to material that can be accessed and stored through the internet, thus excluding "real time" material, such as chat groups (ABA 2001a).

Classification system

The prohibition of content on the internet is based on the National Classification Board system for films and videotapes. Material which is classified with an "RC" or "X" is banned. This includes material containing detailed instruction in crime, violence or drug use: child pornography; bestiality: excessively violent or sexually violent material; and, actual depictions of sexual activity (ABA 2001a).

Material classified with "R" includes excessive violence or sexual violence, implied or simulated sexual activity, and material that requires an adult perspective, and can only be viewed by adults aged 18 years and over (ABA 2001a). R-rated material is prohibited on the internet if it originates from within Australia and does not have a restricted access system (i.e. an adult verification device is required before the material can be viewed) (ABA 2001a). The lack of regulation of R-rated material generated overseas is said to be due to "the technical difficulties associated with blocking overseas material" (Family and Community Development Committee 2000). This problem would also seem to apply to "RC" and "X" rated material.

Australian ISPs are now obliged to advise all customers about the availability of filter software (Crabb 2001). They are not required to "actively review, monitor or classify" the content hosted on their service (ABA 2001a: Content regulation 1). Where the ABA decides that material hosted in Australia is prohibited, they notify the Internet Industry Association to direct the ISP to remove the material (Family and Community Development Committee 2000). This problem would also seem to apply to "RC" and "X" rated material.

The ISP is required to take "all reasonable steps to prevent user access to the site" (Family and Community Development Committee 2000: 153). The Act interprets this statement to mean that this should not impose "unnecessary financial and administrative burdens" but be a "best efforts" service (Explanatory Memorandum 1999, reported by Family and Community Development Committee 2000:153).

The legislation allows for criminal prosecution and provides for fines of $5,500 for an individual, and up to $27,500 for an organisation, for each day the ISP fails to remove the offensive material (ABA 2001a). ISPs who comply with directions to remove material are protected from civil proceedings against them. Sanctions are applied for non-compliance with industry directions. These include withdrawal of industry association rights or privileges and compliance incentives, such as the right to display compliance symbols (ABA 2001a: Content regulation 1). Where prohibited material is not hosted in Australia, the ABA notifies approved suppliers of filter software about identified offensive sites and, in the case of child pornography, relevant law enforcement agencies.

The ABA has recently released a report on the outcome of the first six months of operation of the ABA regulations of internet content (Crabb 2001: Department of Communications, Information Technology and the Arts 2001). The report states that the major providers (which serve 80 per cent of Australian internet users), and 78 per cent of the smaller providers, are complying with the regulations (Department of Communications, Information Technology and the Arts 2001). (However, it should be noted that many smaller providers are not members of the Internet Industry Association, and are therefore outside the system of regulation.)

Also noted was the reporting to the ABA of 491 web-sites deemed to be offensive (Department of Communications, Information Technology and the Arts 2001). Eighty per cent of investigated sites contained child pornography or paedophile activity, and 245 sites were passed on to state and federal police. No complaints were received about detailed instruction in crime and sexual violence: 93 sites were not investigated due to a lack of information.

The federal government is presently drafting new guidelines in relation to the internet and privacy issues (Cant 2001). These guidelines may address some of the problems associated with the targeting of children by marketing or commercial agencies. However, they seek to limit, rather than eliminate this problem, as organisations have a legal and commercial right to continue to collect private information where this is considered necessary for one or more of their functions.

Future directions

Internet service providers are in a key position to assist with the prevention of child abuse on the internet, and arguably should therefore be "more visible and proactive on this front" (Finkelhor et al. 2000). A (limited) exploration of web-sites undertaken for this paper suggests that, despite self-regulation, the internet industry in Australia does not have a significant presence in addressing child protection issues. The Australian based Internet Industry Association states that it is focused on "market led. market driven solutions" (Internet Industry Association 2001). It has also stated that the industry is not expected to endure "unnecessary" expenses to protect children (Family and Community Development Committee 2000: 153). It is not clear what this means in practice.

Although a direct comparison cannot be made, it is interesting to note the findings from a study on the success of self regulation in the video industry' in Japan (Bureau of Citizens and Cultural Affairs 1991, reported in Kodaira 1998).
Over half of those surveyed who were associated with video shops believed that horror and adult videos had a negative influence on children, yet no shop enacted self-regulation on selling or renting these videos, because of financial considerations. Thus, in his situation, it was found that commercial interest took precedence over self-regulation and the welfare of children. Indeed, the internet industry does not appear to meet accepted criteria for the operation of industry self-regulation, which is only to be used where "there is no strong public interest concern, in particular, no major public health and safety concern" (Coghlan 2000: 7). It could be argued that child wellbeing is a major public health and safety concern.

According to welfare economics, industry should pay me true costs of production, including social and environmental costs (Pigou 1960). At present the wider community is meeting most of the costs of the Internet Industry in the areas of child abuse treatment and prevention. Thus, in effect, the community is subsidising private industry. These costs are being met by non-profit community watch-dog and service groups (such as KIDs.ap and Cyberangels), federal and state governments (through law enforcement and other agencies and initiatives), and the endpoint user, including schools and parents, and of course children. There is a strong argument that the internet industry should meet a substantial proportion of these costs, along with a smaller proportion being met by other stakeholders, particularly, governments. It could be argued that some internet services (such education and information services) provide the community with a social good, and thus a certain level of government subsidy is warranted.

The Industry could be required to take greater responsibility for the protection of children by moving from self-regulation to quasi-regulation or explicit government regulation, both of which are common in other industries in Australia. For example, the right to operate as an ISP could be subject to a system of accreditation which requires certain levels of operating standards, such as the filtering of material deemed to be offensive by government or other regulatory authorities, prior to relay. Alternatively, ISPs could contribute to the cost of preventing child abuse through a taxation system which reflects the volume of material relayed. Such changes should be considered prior to 1 January 2003, the current deadline for the Commonwealth’s next major review of internet regulation (Family and Community Development Committee 2000).

Prosecution of offenders

Criminal prosecution of internet offenders requires appropriate legislation within national boundaries and a substantial degree of international co-operation, especially between law enforcement agencies. Evidence that this collaboration is beginning to take place can be seen with the arrest of 180 members of the WOnderland Club (four of whom were based in Australia). These arrests were preceded by four years of planning and co-operation between 13 countries (O’Reilly 2001). Similarly, in April 2001, Spanish police broke an international child pornography ring of approximately 80 people, from 21 countries (European Commission Information Society 2001b).

However, despite these reported successes, a number of features of the internet create difficulties for law enforcement. As internet crime (in general) usually transcends state mid national boundaries, it is often unclear where the offender should be prosecuted and how differences should be reconciled between state and country legislation in relation to criminal law, infringement of privacy, computer hacking, trade secret protection and illegal contents.

In Australia during the mid-1990s, specialist internet investigation squads were established in New South Wales, Victoria and Queensland (Editor 2001c). In addition, there are other specialist groups located within state-based child exploitation or sex offender squads that take responsibility for law enforcement in relation to child sexual abuse associated with the internet. These squads have developed strong inter-agency liaisons with police forces overseas and adopt a preventative stance rather than having a solely reactive perspective (O’Connor, personal communication, 2001).

However, the creation of a national child exploitation law enforcement agency would be of considerable advantage to law enforcement policies and programs (O’Connor, personal communication 2001). Such an agency could facilitate Australia’s co-operation with international agencies that investigate and prosecute internet crime, and facilitate inter-country agreements about legal jurisdiction and searching and seizing across country boundaries (Directorate General, Justice and Home Affairs 1999).

This might include actions such as the placement of police liaison officers overseas to track the behaviour of their own nationals where they are a threat to children (Children’s Legal Centre 1997). Such a law enforcement agency could act as a Centre of Excellence to understand and respond to internet crime and provide specialised training, as well as undertaking systematic monitoring and scanning of the internet. It could also include the reinstatement of the recently disbanded Australian Federal Police’s child sex unit, established in 1995 to address law enforcement issues in relation to paedophiles operating between Australia and Asia (Ludlow 2001).

Loopholes in the law

Legal loopholes and legislative variations are often exploited by the paedophile community (Directorate General, Justice and Home Affairs 1999). For example, Interpol reports that most of the child pornography available on internet sites now originates in Japan due to their lack of laws prohibiting its production (Editor 1999). On a more positive note, over 20 countries have allowed extra-territorial legislation to be applied in the case of sex offenders, although the number of prosecutions based on this legislation is very small (Dionne 2001).

While a country may have laws aimed at prohibiting sexual offences against children, it is often difficult to obtain a prosecution. In many countries, including Australia, existing laws on sexual assault and child pornography are inclusive of illegal internet activity However, there are difficulties in translating these laws to the Internet media (Ferrier 2000). Most child pornography legislation assumes that an actual child is the model and does not extend to the morphing of
images of children (Caicetas-Santos 2001). Laws in the United Kingdom have been found to be inadequate when attempting to address the problem of sexual offenders who use internet chat rooms to groom a child for sexual assault, as the offender can only be prosecuted after the sexual assault of the child has taken place (Gillespie 2000).

It would appear that Australia has similar translation problems. Charges against a suspected offender who allegedly attempted to procure a child to commit "an indecent act", were recently dismissed by a Queensland magistrate (Editor 2001c). The man was apprehended after a Queensland Crime Commission investigator posed as a 12-year-old girl in a chat room. The case was dismissed because there was no actual child and the offender was seen to be only preparing to procure a child, not attempting to procure a child. Similarly, child protection authorities were reported as being unable to prevent a 14-year-old child leaving Australia with a 38-year-old man she met in a chat room (Murphy 2001).

Some Australian states and territories have moved to create new or amended legislation. Victoria, Queensland, Western Australia and the Northern Territory have passed legislation specific to illegal internet content but their effectiveness remains largely untested in court (Family and Community Development Committee 1995). The Australian Capital Territory has recently amended its Crimes Act to make it an offence to use electronic media to encourage a child under 16 years to become involved in a sexual act (Field 2001). A recent development in New South Wales requires child sexual offenders, including those convicted in relation to child pornography, to be registered with the police for a period of between eight and 15 years (Nott 2001).

Finally, the Victorian Parliamentary Committee’s 1995 Inquiry into Sexual Offences against Children and Adults (Crime Prevention Committee 1995) offered some food for thought. Although the Committee’s recommendations have not yet been adopted, some are worthy of consideration on a national basis. These include the development of uniform laws to regulate the content of electronic Bulletin Boards, and the mandatory reporting of all child pornography detected by commercial photographic processors, including "discreet" processors often attached to adult shops (Hopley 1994, reported by Crime Prevention Committee 1995: 294).

**Setting a deterrent**

Another issue that has generated some discussion is the sentencing of those convicted for distributing child pornography on the internet. Characteristically, such offenders have been given minor sentences perceived as being of insufficient severity to act as a deterrent (Hunter 2001). In 1999, the maximum penalty for possessing child pornography in Australia was two years jail and a $60,000 fine. However, few offenders have suffered the full force of the penalty, most only receiving a penalty of a few thousand dollars (Petraitis and O’Connor 1999). Similar issues have been encountered overseas. For example, in the United Kingdom, a member of the WOnderland club who had 24,342 child pornographic images on his computer was sentenced to a 12-month community-based order and was required to attend a sexual offender program (Devlin 1999).

In the last few years, there have been attempts to strengthen the penalties associated with internet sex crimes both in Australia and across the world. In Victoria, for example, the maximum jail sentence for possessing child pornography was raised in November 2000 from two to five years (O’Connor, personal communication, 2001).

**Anonymity on the Internet**

The ability for an offender to remain anonymous on the internet creates further problems for law enforcement. The more an offender perceives his ability to remain anonymous, the more explicit is the child pornography placed on the internet (Forde and Patterson 1998). Internet criminals often have sophisticated computer knowledge, and material posted to newsgroups may be made "potentially untraceable" as e-mail messages can be sent anonymously through an intermediary or an anonymous remailer (Forde and Patterson 1998: 3).

The ability to remain anonymous may be bolstered by access to a variety of sites that offer advice and assistance, and access to sympathetic ISPs, which allow illegal material to be posted (Forde and Patterson 1998). It is also common for offenders to use codes and encryption to restrict access to such sites, thereby minimising detection. For example, the WOnderland Club required seven layers of security checks to enter the web site, each one protected by encryption or passwords (BBC News online 2001).

Feather notes that "(t)echnical leapfrog... is played out on a daily basis between law enforcement and the typically more technically superior cybercriminals" (1999: 21). To date, law enforcement officers have lacked the knowledge and equipment to track offenders on the internet but increasingly, national units are being established to address this problem (Fournier de Saint Maur 2001).

Other forms of offender-related prevention services, including the monitoring of the activities of known sex offenders, the provision of programs to prevent people becoming child sex offenders, and treatment services for sex offenders, are beyond the scope of this paper.

**KEEPING PACE WITH RESEARCH AND TECHNOLOGY**

A dominant theme throughout the literature is how little is known about the impact of the internet on children and society, with research on children’s interaction with electronic media being “in its infancy” (Shields and Behrman 2000: 10). Although some research examining Australian internet use is currently being undertaken (ABA 2001c), there is still insufficient understanding of how long children spend using the internet, and for what purposes (Department of Communications, Information Technology and the Arts 2001; Montgomery 2001). Further, there is almost no research on how media depictions of “normal” sexual behaviour influence children and very little is known about the effects of pornography on those who view it. Specifically, little is known about the impact of viewing pornography on young children, and even less on the impact of sadistic and violent pornography (Carlsson 2001: 62; Iannotta 2001).
While children's exposure to violence on television and in films has been researched for some time, the complexity of the issues "make it difficult to reach clear-cut conclusions" (Sanson et al. 2000: ii). However, there is said to be reasonable consensus that prolonged exposure to violence is one factor which leads children to be more likely to display aggressive behaviour in the long term (Sanson et al. 2000).

At present, there does not appear to be any research which examines the impact on children of repeated exposure to inappropriate and offensive material. Indeed, the whole process of children's cognitive learning, and how attitudes and lifelong positions are formed, is not yet understood (Arnaldo and Finnstrom 1998).

In addition, research is needed on internet offenders in order to understand who they are, and to gain further insights about paedophile internet practice. In an allied issue, and taking into account privacy considerations, technological research is needed to ensure that an offender's ability to remain anonymous on the internet is significantly hampered (Fordo and Patterson 1998).

**The changing nature of the Internet**

The nature of the internet is rapidly changing. Barr (2001) speculates that by 2010 there will be an explosion in the number of connected devices, a dramatic increase in traffic, and ever burgeoning amounts of information across the system. There are reports on the development of a "radical" new internet system called Freenet, which enables information to travel between home computers without the need for ISPs (Kleiner 2001:13). This has potentially grave implications for children in an unregulated internet environment. The article notes that the creator of the technology is a "free speech absolutist who feels that today's internet is vulnerable to censorship" (Kleiner 2001: 13).

The development of these systems raises many issues in relation to technology uncritically shaping our future lives and its likely impact, particularly on children. Such "advances" give salience to Finkelhor and colleagues' (2000) view that there is a need for better cooperation between social scientists and internet technologists to develop strategies to address offensive internet content. At present it appears that the community is allowing scientists who design technological developments, in association with companies who market the products, to dictate the form and speed of changes in technological use.

It should also be noted that there is currently no requirement that internet developers meet any of the costs associated with the "downside" of technological development or understanding adverse impacts. Indeed, there is no requirement that an "impact statement" be undertaken at any stage of development, as is now common practice in many industries, such as mining and forestry, and in infrastructure developments. Nor is there any form of ethics review or evaluation, as required by many academic communities and institutions.

One strategy mooted is the mandatory inclusion of Child Impact Statements, such as those suggested by Rayner (1994), requiring government and non-government agencies to consider the effect of particular technologies on children. Impact statements would allow planning to be undertaken to address possible adverse effects and provide a time lag in which to initiate research and establish prevention initiatives.

A major Australian research initiative has seen the establishment of a Cooperative Research Centre for Smart Internet Technology (Barr 2001). The initiative involves nine universities in five States, along with government agencies and major corporations, such as Hewlett Packard, Motorola and Telstra. The Centre aims to "research and develop a scalable, robust Internet that is 'smart' in assisting its end users" (Barr 2001). Unfortunately, the five listed objectives of this Centre make no mention about research on the impact of the internet on society or children.

**CONCLUSION**

Within a relatively short period of time the internet has revolutionised communication and information sharing across the world, a revolution that has been eagerly embraced by Australian society. It has been claimed that children are at the "epicenter of the information revolution" (Katz 1996: 123, quoted in Valentine and Holloway 2001), leading the way in accessing and utilising the range of available internet services.

However, just as the internet has become a source of significant positive change, it has also created new opportunities for the abuse or exploitation of children and young people. Although definitive data does not exist, it would seem that a significant number of Australian children are being targeted for sexual purposes via the internet and/or exposed to material that is offensive or developmentally inappropriate. Using Australian population figures and extrapolating from US research (Finkelhor et al. 2000), based on the assumption that approximately one-third of Australian children, aged 10-17 years regularly use the internet, it may be that over 50,000 children will be approached annually on the internet, for sexual purposes.

No doubt the speed with which internet electronic communication has been implemented in Australian and other Western countries has contributed to the lagged response in addressing child abusive aspects of the internet. Certainly it would appear that over the last few years there has been a rapid growth in recognition of the problem of internet-based maltreatment of children in the research literature. However, this has not as yet translated into adequate levels of research to understand the issues, prevention programs (apart from some community education initiatives), or the development of programs to remedy the impact of online abuse once it has occurred. Perhaps one reason for this low-level response relates to the fact that the issue is still largely being overlooked by many parents and the wider community.

Australia already protects children from material that is considered to be harmful or disturbing through the National Classification Code (Classification (Publications, Films and Computer Games) Act 1995, (Cwth)). In addition, many parents impose strict limits on viewing television and have carefully taught their children about other societal dangers, such as being approached by strangers on the street, messages that have been reinforced in school-based prevention programs. Yet despite the prevalence of
internet connections in Australian homes, and with the exception of the introduction of filtering or blocking software, societal and parental vigilance has not been extended nearly as vigorously to educating children about the dangers of the internet, partly because of a lack of detailed knowledge about the internet, its services and/or the extent of children's access.

Clearly, there is a need for greater community education, particularly for parents, as to the nature and operation of the internet, including its inherent dangers. Further, existing school-based internet instruction for children needs to incorporate a tailored personal safety program in order to reduce the risk of harm and to ensure children are provided with strategies that can assist them when faced with inappropriate online contacts or material.

Finally, taking into account a reluctance to censor human behaviour or communication, it would appear that there is a need for governments with the broader community and the community (with the active participation of children and young people) to explore the restriction of internet services, or to establish service standards or regulations for internet service providers as a means of reducing the presence of harmful material and behaviours online. It is contended that national leadership is needed to fund a research agenda to oversee national-level legislative and policy development and a criminal justice response; and to drive the development of prevention and intervention measures, in order that the internet is not used as a vehicle for the abuse of children. Given the dramatic growth in internet usage in Australia, it is imperative that safeguards be put in place now, rather than in a decade's time, when it may well be too late.

"Issue Paper No 16 will look at mass media education and prevention campaigns".

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Research collection and library

The Clearinghouse has compiled and catalogued a comprehensive collection of the latest international and Australian child abuse prevention research and practice literature and resources. Materials are acquired in all formats - books, manuals, periodicals, newsletters, audio-visual materials and electronic resources. Training manuals and unpublished materials are also acquired.

Material housed by the Clearinghouse may be browsed at the institute, or borrowed or obtained in photocopy format (where applicable) via your own library. For copyright reasons, photocopies cannot be provided by the Clearinghouse direct.

Help desk

A help desk is staffed during office hours to answer queries related to child abuse prevention, family wellbeing and child protection. Print-outs of database searches can be provided upon request. Queries can be addressed by telephone, fax, mail, email, or in person. Requests for specialised information are referred to the Clearinghouse Research Advisor, Dr Adam Tomison.

Contact the help desk. Phone: (03) 9214 7871; Fax: (03) 9214 7839; Email: fic@aifs.org.au

Website

The Clearinghouse website (www.aifs.org.au/nch/) provides:
- information on Commonwealth and State and Territory initiatives;
- database of child abuse prevention program and activities in Australia;
- links to Australian and overseas websites;
- electronic versions of Clearinghouse publications; and
- news of forthcoming conferences and events.

Email discussion list

childprotect is a moderated list for the discussion of child abuse prevention and child protection research, policy and practice issues. Its aim is to promote the exchange of information and ideas between Australasian and other professionals working in the field of child abuse prevention and child protection. Participants include: child protection workers and other health and welfare service providers; professionals working in the criminal justice system, education and training or in policy and service planning; and researchers and information providers.

The childprotect list provides a forum for the notification or exchange of ideas on:
- research issues such as theory, projects and methodological issues;
- developments and strategies in child protection and child abuse prevention;
- best practice principles and broader family violence issues;
- upcoming conferences and workshops; and
- new publications and online resources, links and websites.

To join the list, send a message to Majordomo@aifs.org.au with the following command in the body of your email message: subscribe childprotect (please leave the subject field blank).

Programs and activities database

The results of the National Audit of Child Abuse Prevention Programs (2000), undertaken by the Clearinghouse, have been captured in a searchable Child Abuse Prevention Programs database. The database contains 1244 entries with detailed information on the 1814 programs included in the Audit. The database is accessible via the Clearinghouse website (www.aifs.org.au/na2.html).

Become part of the child abuse prevention network!

The National Child Protection Clearinghouse at the Australian Institute of Family Studies serves as an interchange point for information, research and initiatives in the child abuse prevention field. It collects and distributes information, and aims for a two-way involvement with the community concerned with child protection. To participate in the work of the Clearinghouse:

- send us your materials relevant to child abuse prevention;
- complete and return a questionnaire on program activities relevant to child protection with which you are involved;
- join the National Clearinghouse mailing list - you will receive two newsletters and two issues papers free of charge each year.